

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A hand-held, electronically controlled injection device (1; 80) for injecting preset doses of a liquid medication~~medications~~, comprising

a housing (2; 81) ~~which is adapted to receive for receiving~~ a medication container (4; 83) containing the liquid medication; and which has a contact surface (16; 97) for contacting adapted to contact a patient's skin, wherein said contact surface comprises a through opening adapted to receive a needle assembly comprising a needle;~~characterized by comprising~~

first actuator means (41; 87) ~~for moving configured to move~~ said medication container (4; 83) ~~within said housing (2; 81) to and from said contact surface (16; 97);~~

retaining means configured to selectively lock said needle assembly at a locked position at said through opening,

wherein during displacement of said medication container towards said contact surface from a first operating position withdrawn inside said housing and in which said medication container is not connected to said needle to a second operating position said medication container is connected to said needle assembly, said retaining means maintains said needle assembly at said locked position.

2. (Canceled)

3. (Currently Amended) A device as claimed in Claim [[2]]~~1~~, ~~characterized by~~ comprising presence sensor means [[[67)]] which configured to generate a presence signal [[[S2)]] to activate said first actuator means [[[41)]] upon said needle assembly housing (31) engaging said opening [[[30)]]].

4. (Currently Amended) A device as claimed in Claim [[2]], ~~characterized in that~~ wherein said retaining means comprise at least one locking lever [(60)] movable between a lock configuration, in which a respective work portion [(62)] projects inside said opening [(30)] to interact with said needle ~~assembly housing (34)~~, and a release configuration, in which said work portion [(62)] is located outside said opening [(30)].

5. (Currently Amended) A device as claimed in Claim 4, ~~characterized in that~~ wherein said locking lever [(60)] is loaded elastically into the lock configuration; and ~~in that a~~ push means ~~(63, 64) are provided~~ is configured to set said locking lever [(60)] to said release configuration at least in said first operating position of said medication container [(4)].

6. (Currently Amended) A device as claimed in Claim 5, ~~characterized in that~~ wherein said push means comprise cam means ~~(63, 64)~~ interposed between said locking lever [(60)] and a support ~~(42) for supporting~~ configured to support said medication container [(4)] and which is movable to and from said contact surface [(16)].

7. (Currently Amended) A device as claimed in Claim [[2]], ~~characterized by~~ comprising removing means ~~(60, 62) for removing~~ configured to remove said needle [(25)] from said medication container [(4)]; said removing means comprising stop means ~~(60, 62)~~ which are activated configured to be selectively activated in a third operating position of said medication container [(4)], close to said second operating position, to lock said needle [(25)] and disconnect said needle from said medication container [(4)] as said medication container [(4)] moves into said first operating position.

8. (Currently Amended) A device as claimed in Claim 7, ~~characterized in that~~ wherein said third operating position is located on the opposite side of said second operating position with respect to said first operating position in ~~[[the]]~~ a travelling direction of said medication container ~~[[4]]~~.

9. (Currently Amended) A device as claimed in Claim 7, ~~for connection to a~~ wherein said releasable retaining means comprise at least one locking lever movable between a lock configuration, in which a respective work portion projects inside said opening to interact with said needle assembly, and a release configuration, in which said work portion is located outside said opening, wherein said needle assembly ~~(32) comprising~~ comprises a needle support ~~[(33)]~~ supporting said needle ~~[(25)]~~ in projecting manner and connectable to one end ~~[(24)]~~ of said medication container ~~[(4)]~~, ~~characterized in that~~ and wherein, in said third operating position of said medication container ~~[(4)]~~, said work portion ~~[(62)]~~ of said locking lever ~~[(60)]~~ is interposable between said medication container ~~[(4)]~~ and said needle support ~~[(33)]~~ to define said stop means.

10. (Currently Amended) A device as claimed in Claim ~~[[2]]~~, ~~characterized in that~~ wherein said releasable retaining means comprise at least one releasable retaining member ~~(406) configured to be~~ actuated by said needle ~~housing assembly~~ ~~[(104)]~~ upon insertion of said needle ~~housing assembly~~ ~~[(104)]~~ into said opening ~~[(98)]~~, said releasable retaining member(s) ~~[(106)]~~ configured to retain ~~retaining~~ said needle ~~housing assembly~~ ~~[(104)]~~ at least during said displacement of said medication container ~~[(83)]~~ from said first to said second operating position.

11. (Currently Amended) A device as claimed in Claim [[10]]~~2~~, ~~characterized in that~~
wherein said releasable retaining means comprise at least one releasable retaining member
configured to be actuated by said needle housing upon insertion of said needle housing into
said opening, said releasable retaining member configured to retain said needle housing at
least during said displacement of said medication container from said first to said second
operating position, and wherein said releasable retaining means further comprise an abutment
surface (107) for limiting~~configured to limit~~ insertion of said needle housing [[(104)]] into
 said opening, said releasable retaining means configured to retain (98)~~and for retaining~~ said
 needle housing [[(104)]] during said reverse displacement of said medication container
 [[(83)]] from said second to said first operating position.

12. (Currently Amended) A device as claimed in Claim [[10]]~~11~~, ~~characterized by~~
 comprising sensor means ~~(109) for sensing~~ configured to sense actuation of said releasable
 retaining member(s) ~~(106)~~.

13. (Currently Amended) A device as claimed in Claim 12, ~~characterized by~~ comprising
 means ~~(95, 87) for reversing~~ displacement of said medication container [[(83)]] immediately
 after said sensor means [[(109)]] have detected a disengagement of said needle housing
 [[(104)]] from said releasable retaining member(s) [[(106)]] during said displacement of said
 medication container [[(83)]] from said first to said second operating position.

14. (Currently Amended) A device as claimed in Claim 10, ~~characterized by~~ comprising
~~removing~~ means for removing said needle [[(96)]] from said medication container [[(83)]].

said removing means comprising stop means [(112)] which may be activated in said second operating position of said medication container [(83)] to retain said needle [(96)] and [[thus]] disconnect said needle [(96)] from said medication container [(83)] as said medication container [(83)] is moved from said second to said first operating position.

15. (Currently Amended) A device as claimed in Claim 1, ~~with said medication container (4; 83) and said needle assembly (32; 105), characterized in that~~ wherein said needle assembly ~~(32; 105)~~ comprises a needle support configured to support (33; 99) ~~supporting~~ said needle ~~(25; 96), and in that~~ wherein at least one of said needle support ~~(33; 99)~~ and an end ~~(24; 100)~~ of a medication container unit ~~(4; 42; 82; 83)~~, comprising said medication container ~~(4; 83)~~ and a holder ~~(42; 82)~~ holding said medication container located (4; 83) inside said housing ~~(2; 81)~~, is provided with at least one elastic flange ~~(36; 103)~~ for connection of said needle support ~~(33; 99)~~ to said end ~~(24; 100)~~ of said medication container unit ~~(4; 42; 82; 83)~~.

16. (Currently Amended) A device as claimed in Claim 1, ~~characterized by~~ comprising first sensor means configured to detect (114, 115, 117; 103a, 121, 122) ~~for detecting~~ proper connection of said needle [(96)] to said medication container [(83)].

17. (Currently Amended) A device as claimed in Claim 16, ~~characterized in that~~ wherein said first sensor means comprise optical transmitter means [(114)] and first optical receiver means [(115)] arranged so that, when no needle [(96)] is properly connected to said medication container [(83)], a first optical ray [(118)] transmitted by said transmitter means [(114)] passes near an end [(100)] of a medication container unit ~~(82; 83)~~,

comprising said medication container [(83)] and a holder [(82)] holding said medication container [(83)] inside said housing [(81)], to reach said first receiver means [(115)], and when said needle [(96)] is properly connected to said medication container [(83)], said first optical ray [(118)] is interrupted by a needle support [(99)] supporting said needle [(96)].

18. (Currently Amended) A device as claimed in Claim 17, ~~characterized in that wherein~~ said end [(100)] of said medication container unit ~~(82, 83)~~ is truncated [(120)] to let said first optical ray [(118)] pass when no needle [(96)] is properly connected to said medication container [(83)].

19. (Currently Amended) A device as claimed in Claim [(17)]~~16~~, ~~characterized by~~ comprising second sensor means ~~(114, 116, 117)~~ for detecting partial connection of said needle [(96)] to said medication container [(83)].

20. (Currently Amended) A device as claimed in Claim [(19)]~~17~~, ~~characterized in that~~comprising a second sensor means configured to detect partial connection of said needle to said medication container, and wherein said second sensor means comprise said optical transmitter means [(114)] and second optical receiver means [(116)] arranged so that, when no needle [(96)] is connected to said medication container [(83)], a second optical ray [(119)] transmitted by said transmitter means [(114)] passes near said end [(100)] of said medication container unit ~~(82, 83)~~ to reach said second receiver means [(116)], and in a configuration where said needle [(96)] is partly connected to said medication container [(83)], said second optical ray [(119)] is interrupted by said needle support [(99)] while

said first optical ray [(118)] still reaches said first receiver means [(115)].

21. (Currently Amended) A device as claimed in Claim 16, ~~characterized in that~~ wherein an end ~~(24; 100)~~ of a medication container unit ~~(82; 83)~~, comprising said medication container [(83)] and a holder configured to hold (82) ~~holding~~ said medication container [(83)] inside said housing [(81)], is provided with at least one elastic flange [(103)] for connection of a needle support [(99)] supporting said needle [(96)] to said end [(100)] of said medication container unit ~~(82; 83)~~, and ~~in that~~ wherein said first sensor means comprise optical transmitter means [(121)] and optical receiver means [(122)] arranged so that, when said needle [(96)] is properly connected to said medication container [(83)], a reflective portion of one [(103a)] of said elastic flange(s) [(103)] reflects an optical ray transmitted by said transmitter means [(121)] towards said receiver means [(122)], and when no needle [(96)] is properly connected to said medication container [(83)], said reflective portion [(103a)] reflects said optical ray in a direction not corresponding to said receiver means [(122)].

22. (Currently Amended) A device as claimed in Claim 1, ~~characterized by~~ comprising second actuator means ~~(40; 44; 86; 84)~~ which are configured to be selectively activated ~~selectively~~ to force the liquid medication contained in said medication container ~~(4; 83)~~ through [(the)] a patient's skin.

23. (Currently Amended) A device as claimed in Claim 22, ~~characterized in that~~ wherein said second actuator means comprise an actuator assembly [(86)] and a push member [(84)] configured to be driven by said actuator assembly [(86)] and which can be moved

axially from a retracted position, located outside said medication container [(83)], to enter said medication container [(83)] and push the liquid medication out of said medication container [(83)] through said needle [(96)], and then returned to its retracted position, said device further comprising a door [(88)] which, in its open position, is configured to permit permits insertion/removal insertion or removal of said medication container (83) into/from into or from said housing [(81)], a door opening mechanism (89, 123, 125, 126, 82) for opening/closing configured to open or close said door [(88)] and a lock mechanism (94, 129) for locking configured to lock at least part of said door opening mechanism, to prevent opening of said door, when said push member [(84)] is located inside said medication container [(83)] and for unlocking is configured to unlock said door opening mechanism (89, 123, 125, 126, 82) when said push member [(84)] is in [its] a retracted position.

24. (Currently Amended) A device as claimed in Claim 23, ~~characterized in that~~ wherein said lock mechanism is designed to lock a door opening button [(89)] of said door opening mechanism (89, 123, 125, 126, 82) when said push member [(84)] is inside said medication container [(83)].

25. (Currently Amended) A device as claimed in Claim 24, ~~characterized in that~~ wherein said lock mechanism (94, 129) comprises a first lever [(129)] ~~which, in a rest position, looks configured to lock~~ said door opening button [(89)] when in a rest position, said first lever configured to be and which is actuated by said push member [(84)] during retraction of this latter to unlock said door opening button [(89)].

26. (Currently Amended) A device as claimed in Claim 25, ~~characterized in that~~ wherein

said lock mechanism (94, 129) further comprises a part [(94)] movable in the direction of displacement of said push member [(84)] and which, in a rest position, is out of contact with said first lever [(129)] and, during retraction of said push member [(84)], is pushed by an end portion [(93)] of said push member [(84)] to come into contact with and actuate said first lever [(129)].

27. (Currently Amended) A device as claimed in Claim 23, ~~characterized in that wherein~~ said door opening mechanism (89, 123, 125, 126, 82) comprises a door opening button [(89)] movable in the direction of displacement of said push member [(84)], a second lever [(125)] actuated by said door opening button [(89)], a locking member [(126)] movable in said direction, actuated by said second lever [(125)] and having a first flange (127), and a medication container holder configured to hold (82) for holding said medication container [(83)] inside said housing [(81)], said medication container holder [(82)] having a second flange [(128)] designed to cooperate with said first flange [(127)] and being pivotable with said door [(88)] from a closed to an open position of said door [(88)] when said second flange [(128)] is released by said first flange [(127)].

28. (Currently Amended) A device as claimed in Claim 22, ~~characterized by comprising~~ injection control button means [(18)], said button means [(18)] configured to successively activate ~~activating~~ said first actuator means [(41)] to move the assembly defined by the medication container [(4)] and needle [(25)] from the first to the second operating position so that the needle [(25)] penetrates the patient's skin, and said second actuator means [(40)] to deliver through the patient's skin a preset dose of liquid medication contained in said medication container [(4)].

29. (Currently Amended) A device as claimed in Claim 28, ~~characterized by comprising~~ skin sensor means ~~(68) which~~ configured to generate a consent signal ~~[[S3]]~~ to activate said button means ~~[[18]]~~ upon interaction between said contact surface ~~[[16]]~~ and the patient's skin.

30. (Currently Amended) A device as claimed in Claim 28, ~~characterized by comprising~~ selecting means ~~(9) for selecting the~~ configured to select a speed at which said medication container ~~[[4]]~~ moves towards said contact surface ~~[[16]]~~ at least as said needle ~~[[25]]~~ penetrates the patient's skin, said selecting means configured to set a ~~and for setting the~~ dose of liquid medication to be injected into the patient.

31.-32.(Cancelled)

33. (New) A device as claimed in Claim 1, comprising said needle assembly.

34. (New) A device as claimed in Claim 1, wherein said needle assembly comprises at least one needle housing fitted to said needle, and wherein said releasable retaining means is adapted to lock said needle housing both during displacement of said medication container from said first to said second operating position and during a reverse displacement of said medication container from said second to said first operating position to permit automatic withdrawal of said needle from said needle housing.